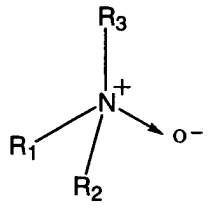
IMPROVED FRACTURING FLUID AND METHOD OF USE

ABSTRACT OF THE DISCLOSURE

Improved aqueous fracturing fluids are disclosed that are particularly useful as well stimulation fluids to fracture tight (i.e., low permeability) subterranean formations. Gas wells treated with these fracturing fluids have rapid cleanup and enhanced well production. The fluids contain small but sufficient amounts of certain amine oxides to aid in the removal of the fracturing fluid from the formation. By facilitating the removal of fluid from the invaded zones, the amount of damage to the fracture faces in the formation is thereby minimized. The amine oxides correspond to the formula I, wherein R_1 is an aliphatic group of from 6 to about 20 carbon atoms, and wherein R_2 and R_3 are each independently alkyl of from 1 to about 4 carbon atoms. The amine oxides in which R_1 is an alkyl group are preferred, and those in which R_1 is an alkyl group of from 8 to 10 carbon atoms and R_2 and R_3 are each methyl or ethyl groups are most preferred.



Formula I